Abbreviations, 621
Abend, W.K., 479
Abraham, L., 515
Acceleration, angular, and vestibular activity, 474-477
Accessory optic system (AOS), 481-483, 506
Adler, B., 535
Afferent fibers
  types of, in semicircular canals, 469-470
Afferent signals
  frequency response curves from, 468-469
  from semicircular canals, 468
After-nystagmus (OKAN)
  effect of labyrinthectomy on, 529
  characteristics of horizontal optokinetic nystagmus in monkey and, 523-524
  models of generation and interaction of VOR and, 588-593
  pursuit eye movements and, 543
  rotation in light and, 525-526
  secondary, 532
Albus, K., 484
Alley, K., 503, 513
Allum, J.H.J., 475, 489, 498, 576
Anderson, D.J., 475
Anderson, J.H., 475, 477
Angaut, P., 502, 503
Angular rotation, and eye stabilization, 521-524, 544
Ansorge, K., 514
Azzena, G.B., 489, 500

Baarsma, E.A., 475
Bagger-Sjöbäck, D., 470
Baker, R., 484, 501, 502
Baloh, R.W., 518
Bárány, R., 504, 546
Barlow, H.B., 487
Barnes, G.R., 518, 519, 541, 576
Baumgartner, G., 487
Behrens, F., 535, 536, 537
Bender, M.B., 526
Benson, A.J., 479, 518, 519, 535, 576
Bernheimer, S., 485
Berthoz, A., 485, 501, 502, 558, 559, 560, 562, 570, 572, 600, 601
Bizzi, E., 519
Blanks, R.H.I., 467, 469, 472, 475, 477, 479, 502
Bles, W., 570
Boisacq-Schepens, N., 515
Borah, J., 580, 602, 603, 604, 605, 610
Braitman, D.J., 472
Brand, J.J., 558
Brecha, N., 481
Breuer, J., 465
Brodal, A., 502, 503
Brodal, P., 484
Buettner, U.W., 474, 475, 477, 497, 498, 515, 517
Büttner, U., 497, 498, 515, 516, 517, 532

Carpenter, M.B., 469, 503
Cazin, L., 483, 548
Central nervous system lesions, effect on optokinetic nystagmus, 538-541
Cerebellum
  eye movements and lesions of, 539-541
  in lower animals, 514
  modification of gain control in, 509-511
  role in generation of ocular pursuit movements and nystagmus, 502-517
Chang, H.-T., 498
Chu, W.H.N., 535, 562, 564, 565, 568, 570
Chun, K.-S., 518
Churcher, J., 535, 568
Circularvection
  characteristics of linearvection contrasted with, 562
Clark, B., 469, 594
Cohen, B., 469, 490, 502, 504, 511, 512, 513, 518, 522, 525, 526, 529, 530, 531, 532, 581, 582, 585, 589, 590, 591, 592, 593, 616
Collewijn, H., 475, 483, 518, 520, 529, 546, 547, 548, 549, 550, 608, 610, 611, 614
Collins, W.E., 545, 546
Commissural pathways, and vestibular nuclei, 477-478
Cortico-pontine projection, 484
Crum Brown, A., 465
Curry, R.E., 580, 602
Curthoys, I.S., 479

Daniels, P.D., 474, 513
Daunton, N., 501
Davidoff, R.A., 539
Davies, P., 550, 552
Decostre-Voisin, M.F., 535
Deecke, L., 515
Dichgans, J., 472, 489, 498, 499, 500, 522, 523, 538, 539, 541, 542, 557, 558, 560, 570, 571, 572
Dieringer, N., 471, 546
Direction selectivity, in visual system, 486-487
Dolezal, H., 559
Donate-Oliver, F., 484
Dow, R.S., 503
Duesing, F., 474, 479, 498
Dufossé, M., 504, 507, 510, 512, 547

Efferent fibers
  functions of, 471-472
  in vestibular system, 470-472
Eldred, E., 514
Estes, M.S., 467
Eye movements
  cerebellar lesions and, 539, 541
  head movement interaction with, 519-521
  models of visual-vestibular interaction and, 576, 606, 610, 616
  prolonged angular rotation and stabilization of, 521
  pursuit eye movement system and, 541-543
  superior colliculus and, 485
  target movement perception and, 567-568
  visual information and, 484-485, 534-535

Felpel, L.P., 479
Fernández, C., 468, 469, 470, 471, 475, 477, 533
Ferrier, D., 504
Finke, R.A., 562, 612, 613
Fischer, M.H., 543, 557
Flocculus
  anatomy of, 503-504
  eye-velocity input in, 508
  gain control modification in, 509-511
  lesions of, 511-513
  pretectum pathways to, 483-484
  Purkinje cell activity and input interaction, 508, 608
  single-neuron recordings in, 504-508
  stimulation studies of, 504
  vestibular input in, 504-506
  visual input in, 506-508
Flourens, P., 405
Fox, R., 534
Fredrickson, J.M., 488, 515
Frequency response curves, of afferent vestibular nerve fibers, 468-469
Fuchs, A.F., 474, 504, 505, 506, 507, 508, 509, 515, 584
Fuller, J.H., 503, 504, 508, 552, 584

Gacek, R.R., 469, 470
Gaze control and efference copy, 606-607
Ghelarducci, B., 504, 507, 510
Gibson, A., 484
Goldberg, J.M., 468, 469, 470, 471, 475, 477, 533
Goldberg, M.E., 485
Gonshor, A., 513, 550, 551, 555
Graf, W., 475
Grantyn, A.A., 485
Grantyn, R., 485
Graybiel, A.M., 502, 503
Groen, J.J., 475
Grootendorst, A.F., 546, 547, 548, 549
Grüsser, O.-J., 486, 487, 535, 536, 537, 538, 562, 567, 568, 569, 606, 607, 608
Grüsser-Cornehls, U., 486, 487, 514
Guedry, F.E., 519, 530, 576

Habituation, vestibular, 546
Haddad, G.M., 512
Hair cells, vestibular, 467-468, 468-470
  diagram, 470
Hartmann, R., 475
Hartwieg, E.A., 502
Head movement, 519-512
Held, R., cit. 557, 559, 562, 563, 566, 612, 613
Henn, V., 474, 479, 489, 492, 493, 496, 515, 531, 532, 533, 550, 581, 586, 587, 593, 605

Heywood, S., 535, 568
Hoffmann, K.P., 483, 487
Honrubia, V., 518
Huang, J.-K., 595

Igarashi, M., 533
Ito, M., 483, 503, 504, 506, 507, 509, 510, 511, 513, 547, 614

Jeannerod, M., 546
Jung, R., 466, 524, 538, 539

Karten, H.J., 481
Kasahara, M., 478
Kawasaki, T., 503
Keller, E.L., 469, 472, 474, 484, 485, 489, 500, 501, 513, 519
Kimm, J., 469, 474
Kleinschmidt, H.J., 548
Klinke, R., 472, 475
Koenig, E., 530
Köerner, F., 534, 535
Kohler, I., 550
Kommerell, G., 534, 535
Kornhuber, H.H., 518, 538, 539, 541
Kornmüller, A.E., 543, 557
Krieger, H.P., 526
Kubo, T., 500

Labyrinthectomy, effect on nystagmus, 529
Lacour, M., 572
Lamontagne, C., 535
Lang, W., 515, 516
Lanman, J.M., 589
Lau, C.G.Y., 576
Lestienne, F., 562, 563
Levick, W.R., 487
Liedgren, S.R.C., 515
Linearvection, and circularvection, 562
Lisberger, S.G., 504, 505, 506, 507, 508, 509, 535, 584, 608
Llinás, R., 507, 514
Loe, P.R., 468
Lopez-Barneo, J., 502
Louie, A.W., 469
Lynch, J.C., 486

Mach, E., 465, 557
Maekawa, K., 481, 483, 503, 507
Magnin, M., 515
Malcolm, R., 469, 532, 546
Mandl, G., 552, 553, 554
Markham, C.H., 479
Matsuo, V., 533
Meiry, J.L., 472, 601
Melvill Jones, G., 467, 469, 475, 513, 518, 532, 546, 550, 551, 552, 553, 554, 555, 568, 581
Merker, B., 562, 566
Miles, F.A., 472, 474, 503, 504, 508, 552, 584
Milsum, J.H., 467, 475
Miyashita, Y., 507
Miyoshi, T., 522
Models, 575-616
Models
  common elements of, 577-582
  notation of internal model in brain in, 580-581
  scope of, 576-577
  VOR-OKN generation and interaction (Raphan-Cohen), 588-593
  VOR-OKN generation and interaction (Robinson), 582-586
  Zacharias-Young cue conflict, 593-599
Morasso, P., 519
Motion perception, 488-497
  vestibular neuron activity in, 489-497
  eye movements and, 567-568
Mountcastle, V.B., 486
Mower, G., 485
Mowrer, O.H., 524
Nakao, S., 503
Nashner, L.M., 570, 572
Noda, H., 504, 505, 509
Nodulus, 513-514
Novak, B., 550
Nystagmus, 518-544
  angular rotation and, 521
  central nervous system lesions and, 538-541
  commissural system in regulation of, 478
  comparison of vestibular nystagmus with OKN and OKAN, 526-528
  deficit of pursuit movement and suppression of, 541
  labyrinthectomy and, 529

optokinetic nystagmus and after-nystagmus (OKN and OKAN), 522-524
rotation in light and, 524-526
secondary after-nystagmus in, 532
semicircular canal stimulation and rotating gravity vector in, 533-534
sigma-optokinetic, 535-537
stationary visual surround and suppression of, 526
vertical nystagmus, 533
vestibular nucleus activity related to, 497-498
vestibular system evaluation with measurements of, 464

Olszewski, J., 515
Oman, C.M., 469, 475, 532,546
Optokinetic nystagmus (OKN)
bedside technique for testing, 541
cerebellar lesions and, 539-541
cerebral lesions and, 538-539
characteristics of horizontal, in monkey, 522-524
comparative data from animal experiments with, 500, 502
cylinder rotation and, 489
models of generation and interaction with VOR of, 582-593
rotation in light and, 524-526
separate systems for pursuit eye movement and, 541-543
sigma, 535-537, 568
in vertical plane, 533
vestibulo-ocular reflex (VOR) and, 518
Osterhammel, P., 545
Oyster, C.W., 481, 482

Pasik, T., 485
Pavard, B., 560, 562, 600, 601
Peripheral, vestibular system 467-473
Petrosini, L., 500
Pfaltz, C.R., 522, 550
Phi phenomenon and pursuit eye movements, 535
Plasticity of VOR, 509, 545-546
role of flocculus, 509-511
in vision reversal, 550-555
Postural reactions, effect of visual scene movement, 570-574

Precht, W., 469, 471, 472, 475, 477, 478, 483, 484, 485, 489, 500, 501, 503, 513, 546, 548, 567
Prepositus nucleus, 501-502
Pretectum, in visual system, 483-484
Primary neurons, 467
in semicircular canals, 467-469
Purkinje, J., 465
Purkinje cell activity, and flocculus input interaction, 504-509
Pursuit eye movements
eye-velocity input in, 508
visual signal and target velocity in, 534-535
Pursuit eye movement systems
models, 582-588
separate systems for optokinetic movement and, 541-543
and target movement perception, 567-568

Raphan, T., 518, 521, 522, 524, 525, 527, 528, 582, 589, 590, 591, 592, 593, 594, 597, 616
Rashbass, C., 535
Raybourn, M.S., 485
Raymond, J., 515
Reason, J.T., 558
Robinson, D.A., 475, 486, 504, 513, 518, 535, 542, 543, 552, 581, 582, 583, 585, 586, 587, 588, 589, 591, 593, 594, 597, 606, 608, 610, 611
Ron, S., 504
Rotation, angular, and eye stabilization, 521-523
"barbecue spit", 533
in light, 524-528
and nystagmus, 522-526
perception of, 594-595, 602-605
Roucoux-Hanus, M., 515
Rubin, A.M., 488, 515

Schaefer, K.-P., 472, 474, 479, 484, 498
Schiller, P.H., 534, 535
Schmidt, C.L., 472
Schmidt, R., 576
Schneider, L.W., 475
Schoppmann, A., 483
Schwarz, D.W.F., 515

Semicircular canals
efferent fibers in, 470-472
in models, 578
primary neurons in, 467-469
types of afferent fibers in, 469-470
Shimazu, H., 475, 478
Shimoyama, I., 504
Shinoda, Y., 475, 477, 503
Sigma optokinetic nystagmus (sigma-OKN), 535-537, 568
Simpson, J.L., 481, 482, 503, 513
Skavenski, A.A., 519
Snider, R.S., 514
Stewart, J.P., 469, 594
Stowell, A., 514
Straschill, M., 487
Strata, P., 483
Stratton, G.M., 550
Sugie, N., 518
Superior colliculus, and eye movement, 485

Takahashi, M., 533
Takeda, T., 481, 483, 503, 507
Takemori, S., 511, 512, 513, 526
Taghavy, A., 487
Täumer, R., 534, 535
Ter Braak, J.W.G., 524
Thomsen, D., 501
Troiani, D., 500

Uchino, Y., 478
Uemura, T., 502, 529
Uvula, 513-514

Van Egmond, A.A.J., 467, 475
Vermis, in visual-vestibular interaction, 514
Vestibulo-cortical pathways, 514, 517
Vestibular-ocular reflex (VOR), 545-555
dominant time constants in, 475-477
modification of, 509-511, 545-555
role of flocculus in, 503, 509-511
stroboscopic light and, 552-554
vestibular habituation to simulus patterns and, 546
Vision reversal, by prism spectacles, 550-555
Visual-ocular reflex
models of generation and interaction of, 581-593
vision reversal and long-term modification of, 550-554
Vestibular system
afferent fibers in, 469-470
central, 474-479
commissural inhibition in, 477-478
direction and convergence from different receptors in, 478-479
efferent system in, 470-472
frequency response curves of afferent nerve fibers in, 468-469
input to flocculus from, 503, 504-506
nuclei cells during angular acceleration in, 474-477
nystagmus measurements for evaluation of, 464
nystagmus velocity and neural activity of, 497-498
primary neurons from semicircular canals in, 467-469
visual-vestibular interaction with, 489-502
Vidal, P.P., 573, 574
Visual system
accessory optic system (AOS) in, 481-483
anatomical pathways in, 480-481
cortico-pontine projection in, 484
visual and association cortex in, 485-487
Visual-vestibular interaction, 488-517
ascending vestibulo-cortical pathways in, 514-516
cerebellum in modification of gain control in, 509-511
combined visual-vestibular stimulation in, 493-497
comparative data in, 498-502
comparison of humans and monkeys for, 530-532
early work in, 465-466
flocculus in, 502-514
interpretation of visual cues with concurrent platform motion in, 559-561
models of, 575-616
nucleus prepositus hypoglossi in, 501-502
ocular counterrolling in, 562-567
postural reactions to moving visual scenes in, 570-574
psychophysics of, 556-574

relation of vestibular nucleus activity to motor output in, 497-498
vestibular input with visual input kept constant in, 491-492
vestibular nuclei in, 489-502
visual-otolith interaction in, 500-501
visual stimulation response of vestibular nuclei neurons in, 489
visual stimulation with vestibular input kept constant in, 489-491
von Reutern, G.-H., 539
von Seelen, W., 487

Waespe, W., 474, 489, 490, 491, 492, 493, 494, 495, 496, 498, 532, 586, 587, 593, 595, 605
Walberg, F., 469
Wersäll, J., 470
Wilson, V., 469, 518
Wilson V.J., 479
Winfield, J.A., 503
Wolfe, J.M., 562, 566
Wolfe, J.W., 514
Wu, C.-P., 498
Wurtz, R.H., 485

Yamamoto, M., 503, 504
Yasui, S., 534, 535, 568, 589, 606, 608, 616, 617
Yoshida, K., 475, 477, 503
Young, L.R., 467, 469, 475, 479, 530, 532, 533, 534, 535, 546, 550, 557, 559, 570, 579, 580, 582, 584, 589, 593, 595, 596, 597, 598, 599, 600, 601, 602, 603, 606, 608, 612, 616, 617

Zacharias, G.L., 561, 580, 582, 593, 595, 596, 597, 598, 599, 600, 602, 603, 612
Zee, D.S., 511, 512, 519, 529, 541, 593